

A/B, I, 42, 2

22 October 1951

AVG MEMORANDUM FOR : \_\_\_\_\_

SUBJECT : Proposal for Research on Improvements  
in Interrogation Techniques by the Use  
of Aural Side Tone Delay.

1. Approximately two weeks ago, \_\_\_\_\_  
\_\_\_\_\_ called me because of his  
knowledge of my previous connection with research matters  
and brought to my attention the subject proposal, copies  
of which are attached hereto. \_\_\_\_\_ was  
in town and arrangements were made for myself and  
\_\_\_\_\_ to witness a demonstration. We were very  
much impressed with this demonstration and feel that this  
device may be possibly used in connection with CIA,  
endeavors. This proposal was referred to  
of I&S. It has since been returned to me with a notation  
that this particular device would not have any feasible  
use in their program.

2. I am passing this on to you in order that you  
may put this proposal into the proper channels, CIA,  
wide because I believe it has a potential use in some of  
our operations. It is my suggestion that it may be of  
value to determine how well our agents may be able to  
react under pressure. It could also be of use in connection  
with prisoner of war interrogation. It appears also, as  
was demonstrated, to have a potential use in connection  
with the program wherein after the interrogator has developed  
critical areas, by skillful use this particular type of  
detection might result in a confession. If any activity  
here is interested in a demonstration or development of  
this proposal, I would be very glad to assist them in  
making arrangements as far as how to contact the proper  
people in the \_\_\_\_\_ If, within a

reasonable time, there

B reasonable time, there is no interest shown we should  
notify the \_\_\_\_\_ to that effect.

A+G \_\_\_\_\_

Attachment : Proposal for Research on  
Improvements in Interrogation  
Techniques by the Use of Aural  
Side Tone Delay.

A+G \_\_\_\_\_

cc:  
Orig. & 1 - Addressee

G 2 - \_\_\_\_\_

\_\_\_\_\_

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PROTOCOL FOR RESEARCH ON IMPROVEMENTS IN  
INTERROGATION TECHNIQUES BY THE USE OF AURAL  
SIDE TONE DELAY

By

C =

C September 14, 1951

04320

Proposal for Research on Improvements in Interrogation Techniques by the Use  
of Aural Side Tone Delay

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*SB* As a result of some discussions between \_\_\_\_\_ of the \_\_\_\_\_ and the undersigned on the subject of \_\_\_\_\_ observations on the effects of side tone delay and the possible application of \_\_\_\_\_ effect to criminal and prisoner of war interrogation, some experiments were conducted to gain an idea of the possible scope and potential importance and practicability of the technique.

*C-B* Subsequently, in a demonstration, \_\_\_\_\_, witnessed by \_\_\_\_\_ of the \_\_\_\_\_, a subject, who had come in for routine lie-detector examination in connection with \_\_\_\_\_ confessed with unusual abruptness when he was subjected to side tone delay during his answers to the particular questions to which he had previously given abnormal blood pressure responses under test with the \_\_\_\_\_ Polygraph.

*D* The apparatus utilized was comparatively simple, consisting of a Magnecord Model IT53-A4 Recorder and Magnecord Model IT63-J Amplifier. This recorder has three magnetic heads for erasing, recording and monitoring a tape as it is pulled through the system at 7.5 inches per second. The recording head is separated from the playback head by 1-1/4 inches, providing a fixed delay of about 0.2 seconds between a sound uttered by the subject into the recording microphone and the recorded-playback signal in the earphones worn by the subject being interrogated. An alternative delay of 0.1 second, obtained with the same record-playback headspacing but with a tape speed of 15 inches per second is available but preliminary tests indicated, as was to be expected from \_\_\_\_\_ work, that a 0.2 second delay has considerable more effect on the subject than a 0.1 second delay. Consequently, the 0.2 second delay was used in further testing.

*C* The subject strongly maintained his innocence in preliminary questioning and during and after the test using the \_\_\_\_\_ Polygraph, which records blood pressure, heart rate, respiration rate and muscular movement. The polygraph record showed abnormal deviations during several key questions. The subject was then interrogated with the aid of the side tone delay apparatus using the key questions and a variety of irrelevant questions. The side tone delay was employed during the answers to the questions which had previously given abnormal polygraph responses and was cut out so that there was no delay during the answers to questions which had occasioned no abnormal polygraph responses. After concluding this part of the interrogation the record was played back and the subject was asked the reason for his difficulty in giving answers to the key questions. The confession followed almost immediately.

It should be pointed out that this technique, or a refined modification of it, if employed with an innocent subject who has given pseudo-guilty reactions, cannot result in false self-incrimination in the nature of things, but it most would result in a somewhat confused state of mind on the part of the subject.

It is therefore our desire to pursue this line of investigation and to devote particular attention to several points. These are:

1. Through investigation of the variables such as length of delay used, the smooth variation of delay during the interval of passing from an irrelevant to a key (guilty response) question, the timing of questions, the reading of a prepared statement versus questioning during the test, the length of answer desired from the subject, etc.

2. The adaptation of the technique to prisoner of war interrogation, since we believe from these preliminary experiments that striking increases in speed and efficiency of the interrogation and subsequent divulgence of desired information may be found possible.

3. The investigation of remote reading instrumentation, since it appears to us that one of the important differences between criminal and prisoner of war interrogation lies in the non-volunteer nature of the latter and therefore questioning without instrumentation attached to the subject may have decided advantages over the usual polygraph technique. It appears reasonable, for instance, that remote indicating infra-red radiator level indicators, which have reached a high degree of development in other fields, could take the place of the blood pressure polygraph attachment without the subject being aware of the measurement taking place. This assumption is based on what appears to be a reasonable expectation of a heart rate, skin radiation correlation.

4. The investigation of the possibility of producing side tone delay and allied effects without the use of earphones. It is believed reasonable to expect that by use of a microphone, ostensibly for recording purposes, but which is a modified throat type of microphone so that undesirable feed-back can be avoided, coupled with focusing speakers, that raise the level of sound in the vicinity of the subject's ears sufficiently above that of his direct voice level so that he is aware only of the sound from the speakers, the effect of side tone delay may be gained without attached earphones. This may be desirable for non-volunteer questioning.

5. Reception detection polygraph techniques have not reached the state at which their use is simple and automatic. As a matter of fact, closer analysis shows that highly experienced operators and translators are a prime necessity because of wide individual differences among subjects. It may ultimately prove possible, however, with improvements in polygraph techniques to operate directly side tone delay by abnormal polygraph responses. Needless to say, the matter is relatively simple from a mechanical and electronic point of view. Servo mechanism techniques would provide wide latitude in the selection of desirable response characteristics. It lies

detector techniques can be sufficiently improved the direct control of side  
tone delay will be an almost immediate reality.

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It might be stated at this point that if the

\_\_\_\_\_ agree to choose this laboratory for the experimental work suggested that the business case load will have to be reduced to accommodate the project. However, it must be further stated that the experiments, by necessity and for adequate results, must be administered using actual laboratory case subjects. It has always been the allegation of \_\_\_\_\_ that failures in lie detection experimentation have been due to the use of experimental case subjects who demonstrate a willingness to cooperate so that the experiments will be a success. Actual case subjects, by the nature of their plight, will not show the same willingness to cooperate to assist the experiment.

\_\_\_\_\_ We believe  
C facilities are adequate and \_\_\_\_\_ actual case load sufficient to complete the experiment.

B \_\_\_\_\_ This preliminary proposal is submitted to the \_\_\_\_\_ for the purpose of ascertaining the possibility of naval interest in and financial support of a research program along the lines discussed above. It is foreseen that a full time investigator will be required. Instrumentation, some of which is available from stock and some of which will have to be specially designed and built, will be required.  
C \_\_\_\_\_ will serve as director on a part-time basis.

Very truly yours,  
C \_\_\_\_\_  
C \_\_\_\_\_